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ABSTRACT

A study investigated whether second language (L2) learners' participation in negotiation with native speakers (NSs) meets their needs for data on L2 lexical and structural features. The question was addressed through an analysis of NS utterances of negotiation that were produced as 20 native speaker-non-native speaker (NS-NNS) dyads carried out four communication tasks in English. The analysis revealed that the NS utterances of negotiation offered data on L2 forms, the meanings they encoded, and some of the structural relationships into which they could enter. Negotiation thereby served the NNSs in ways that supplemented its two most widely acknowledged contributions to the L2 acquisition process, i.e., NNS comprehension of L2 input and modification of interlanguage output. However, the analysis also revealed that the NS utterances of negotiation contained few explicit cues that could help the NNSs distinguish between lexical and structural features of their interlanguage that were target-like and those that were not. Thus negotiation appeared to address NNS needs for data on features that were part of the L2, but offered no explicit information on which of their own interlanguage features did not belong to the L2. Contains 53 references. (Author/LB)

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Do second language learners need negotiation?[1]

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Does second language (L2) learners' participation in negotiation with native speakers (NSs) meet their needs for data on L2 lexical and structural features? This question was addressed through an analysis of NS utterances of negotiation which were produced as twenty native speaker-non-native speaker (NS-NNS) dyads carried out four communication tasks in English. The analysis revealed that the NS utterances of negotiation offered data on L2 forms, the meanings they encoded, and some of the structural relationships into which they could enter. Negotiation thereby served the NNSs in ways that supplemented its two most widely acknowledged contributions to the L2 acquisition process, i.e., NNS comprehension of L2 input and modification of interlanguage output. However, the analysis also revealed that the NS utterances of negotiation contained few explicit cues which could help the NNSs distinguish between lexical and structural features of their interlanguage that were target-like and those which were not. Thus negotiation appeared to address NNS needs for data on features that were part of the L2, but offered no explicit information on which of their own interlanguage features did not belong to the L2.

Theoretical and Research Background

Do second language (L2) learners need negotiation? Judging from the considerable amount of attention which has been given to the study of negotiation, the answer to this question would seem to be "yes." Numerous papers have focused on identifying and describing negotiation and its aliases such as interactional modification and conversational adjustment (See, for example, Doughty and Pica, 1986; Duff, 1986; Ellis, 1985; Gass and Varonis, 1985; Long, 1980, 1983; Pica, Holliday, Lewis, and Morgenthaler, 1989; Pica, Young, and Doughty, 1987; Porter, 1986; Rulon and McCreary, 1986; and Varonis and Gass, 1985a, b). Throughout this work, negotiation has been viewed as an activity through which L2 learners and interlocutors work together linguistically to repair or resolve impasses in communication and reach mutual comprehension of message meaning. Their participation in negotiation has been shown to give learners opportunities to comprehend L2 input and to modify production of their interlanguage forms and

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structures, which are two experiences widely regarded to be critical to successful L2 learning. (For theoretical work on input comprehension and modified production, see Krashen 1985 and Swain 1985, respectively).

One of the most characteristic features of negotiation is that it alters the structure of interaction between two or more interlocutors as they engage in social discourse. This takes place as one interlocutor lets the other know that something is not clear or has not been understood. Excerpts (1) and (2), from Pica et al (1989), and Excerpt (3), from Pica (in press a, b), were taken from communication tasks which required the replication of a picture by one interlocutor based on directions from the other. As shown in these excerpts, an utterance such as *what?* or *you mean the trees have branches?* or *underneath? under under? another word?* can serve as a negotiation signal which in turn interrupts the flow of interaction. The interlocutors then work out this impasse linguistically. Their work can take many forms. It can be as brief as the native speaker - non-native speaker (NS - NNS) exchanges in Excerpts (1) and (2) below. In these excerpts, the signal receiver repeated, rephrased, and/or defined a word from a previous utterance or provided a simple acknowledgement such as *yes*. The work of negotiation can also be considerably more extensive, with numerous signals and responses, as shown in Gass and Varonis (1985), Pica (1987), and Varonis and Gass (1985a, b). Among other options, interlocutors can also abandon their negotiation and switch to a new topic or close off their communication altogether.

	NNS	**NS**
(1)		
		... is your drawing very neat?
	what?	neat, I mean all the lines come together, it's orderly
	no	
(2)		
	and tree with stick	you mean the trees have branches?
	yes	
(3)		
		... put the mushroom underneath the other mushrooms underneath the mushrooms ok? got it? all right anybody who can ask a question, have a question?
	underneath? under under?	

another word?	underneath the mushrooms that are already there underneath is one word it means under
oh oh	

Research on negotiation has been grounded in the theoretical perspective that comprehension of unfamiliar L2 input and modification of interlanguage output are what are needed if learners are to move beyond their current developmental level. As the excerpts (1) - (3) suggest, and as the earlier cited research has revealed, learners' participation in negotiation provides them with opportunities to address such L2 learning needs. However, what research has also revealed is that it is not always the case that such opportunities are taken by the learner, or if taken, lead to successful comprehension or modified production.

Thus, as Hawkins (1985) has shown in her research on NS-NNS negotiation, L2 learners who often misunderstand the meaning of the negotiation moves and queries of their interlocutors or who are unable to understand them at all nevertheless manage to sustain the negotiation with utterances that are topic -appropriate and relevant to the negotiation. Further, as Brock, Crookes, Day, and Long (1986) and Schmidt and Frota (1986) have found, learners appear to make little use of interlocutor signals during negotiation as a basis on which to modify their interlanguage. This can be seen below in (4), from Brock et al (1986: 235). Here the NNS was given a NS version of the verb *do* , modified from its base form of *do* in the NNS initial question into the more target-like past form of *did* in the NS follow-up question; yet in responding to the NS, the NNS returned to the original form and did not use the more target-like version: *Yeah how do you like it?*

(4)

NNS	**NS**
Uh how- how do you feel Taiwan?	How did I like it?
Yeah how do you like it?	

These findings represent a smaller but important body of work which has questioned the efficacy of negotiation in assisting learners' comprehension and production and indeed challenged the scope of its sufficiency and importance to the L2 learning process. (See, in addition, Aston, 1986 and Sato, 1986). This work has dampened, though by no means obliterated, the potential contributions that

negotiation can make to L2 learning. What it has suggested, however, is that negotiation provides conditions which assist learners' comprehension and push them to modify their interlanguage production, but does not necessarily guarantee that they will accomplish these goals successfully. Fortunately, recent research aiming to distinguish between variables which enhance conditions for successful negotiation from those which inhibit such conditions has already provided some of the needed specificity in this area. This can be seen, for example, in studies on variables such as the gender pairing of learners and their interlocutors (Gass and Varonis, 1986; Pica, Holliday, Lewis, Berducci, and Newman, in press), the types of tasks in which they engage (Pica, Holliday, Lewis, and Morgenthaler, 1989), and their roles and relationships as interactants (Pica, in press a, b; Pica, Young and Doughty, 1987).

Just as recent empirical work on negotiation has both raised and responded to concerns regarding the extent to which negotiation fulfills learners' needs to comprehend L2 input and modify their interlanguage output, a great deal of theoretical work has brought about new ways of analyzing, defining, and refining learners' needs beyond these two comprehension and production processes. This newer theoretical perspective on L2 learning has provided in turn a basis on which to re-assess the role that negotiation might play in assisting the needs of L2 learners. Thus, to address the question in the title of this paper, "Do Second Language Learners Need Negotiation?" requires first an update of second language acquisition (SLA) theory on what it is that learners are believed to need for their L2 learning and secondly, a re-examination of negotiation data to determine whether and if so, how negotiation might meet these needs. Both the theoretical review and analysis of negotiation data are therefore presented below.

What do language learners need in order to learn an L2?

This question has been addressed from a variety of perspectives with respect to both second language pedagogy and research. Analyzing learners' needs has been a principal thrust of specific purpose language teaching. Within this field, determining "needs" has meant finding out what learners are expected to do with the L2 in professional, academic, and other targeted sociocultural contexts and designing their curriculum and classroom experiences accordingly. As noted above, SLA theory and research have made reference to learners' needs through such constructs as "comprehensible input" (Krashen, 1985), "modified interaction," (Long, 1985), and "comprehensible output "(Swain, 1985). Constructs such as these have suggested

that what learners need is related to the linguistic context of their language learning and their opportunities for L2 use therein.

Current books on SLA theory such as those of Birdsong (1989), Cook (1988), and White (1989), chapters in edited collections, particularly those in Gass and Schachter (1989), and articles throughout the major research journals, for example, Lightbown and Spada (1990) and White (1987, 1988) have brought further attention and a sharper focus to the "what" of questions regarding learners' needs. Based on work of this kind, the answer to the question of what learners need appears to lie, in part at least, in " linguistic data," more specifically, two kinds of data. Learners need data on what is in the L2 and on what is not in the L2.

The "what" of the data -- as well as the "what to do" with the data -- have been the subject of considerable theoretical debate. The debate over the "what to do" with the data has been dependent on the theory of language learning that can be used to describe, analyze, and understand the learning process, for example, language learning as parameter setting and re-setting, as hypothesis testing, as problem solving, as any number of linguistic, cognitive, and/or psycholinguistic processes. Obviously, there are constraints on language and language learning that both help and hamper learners' L2 development. There are language specific and language universal restrictions -- on clause movement, for example. There are also learner-internal restrictions such as those on the mental capacity through which learners make use of L2 data and on their cognitive processes of attention, perception, and problem solving. However broadly or narrowly these various constraints and capacities are defined, and however strongly or weakly claims are made about their role in second language learning, they are generally accepted as fundamental to the learning process.

Much of the debate over the "what" of the data is related to questions of what theory of language should be used to describe and analyze the linguistic characteristics of L2 input and interlanguage systems, for example, as structures and rules, forms and functions, principles and parameters, etc. (For an excellent discussion of this topic, see Gregg 1989). Further, despite consensus that learners need data on what is *in* the L2, i.e.,"positive L2 evidence," there has been considerable debate over whether learners need data about what is not in the L2, i.e., "negative L2 evidence." Unfortunately, a good deal of this discussion has been clouded and narrowed by issues related to correction of learner error, and has ignored other resources for negative evidence such as explicit instruction, metalinguistic input, and, as will be discussed below, interlocutor signals to the learner about lack of message clarity and

comprehensibility. (See Schachter, 1983, 1984, 1986 and White, 1989 for elaboration of these issues).

In light of -- or in spite of-- the debate over the "what" of the linguistic data that learners require, these data can be regarded in fairly general way as data which cover three linguistic areas. First, learners need data on L2 form and L2 forms, i.e., data on the segments or units of form and meaning that are in the L2 and those that are not. Learners also need data on L2 form-meaning relationships. This would include data on what L2 segments or units mean and on what they do not mean as well as data on whether two or more forms mean the same thing, almost the same thing, and not the same thing at all. Thirdly, learners need data on L2 form-structure relationships, particularly on the distribution, collocation, and movement of L2 forms, both those that are possible in the L2 and those that are not.

Where does negotiation fit in with learners' needs for data on what is and what is not in the L2, and the constraints and capacities that bear on the L2 learning process?

This question will be addressed in the following ways: through a review of relevant theory and research on SLA, within the presentation of a theoretical framework for analyzing negotiation, and in light of findings from a study which used the theoretical framework to analyze learners' negotiation with native speakers.

How might Negotiation Meet Learners' Needs for L2 data?:

How are learners believed to obtain L2 data? Claims have been made that this can be accomplished through:

(1) contextualized L2 input, for example, samples of L2 which refer to visible objects, familiar topics, etc., as discussed in Krashen (1981, 1982, 1983, 1985).

(2) explicit L2 instruction, timed according to learner readiness and stage of development, as shown by Pienemann (1985, 1989).

(3) repeated L2 exposure, especially over time, as described by Krashen (1983, 1985).

(4) comprehensible L2 input, as elaborated by Krashen (1981, 1982, 1983, 1985) and Long (1983, 1985)

(5) comprehension of initially incomprehensible L2 input, as shown in research by Gass (1988), Long (1983, 1985), Pica, Young, and Doughty (1987).

(6) focus on L2 form, as revealed in the work of Doughty (1988, In press), Long (1990), and Schmidt (1990), and Schmidt and Frota (1986),

These last four ways of obtaining L2 data -- through repeated exposure, comprehensible input, comprehension of input, and focus on form -- are closely linked in a number of ways, and bear some discussion as they tie in closely to what learners' participation in negotiation might offer them as a source of L2 data.

First, the label "comprehensible input" is used here to refer to the kind of input in Krashen's sense of the term as that which learners are able to comprehend in regard to meaning, but which contains L2 forms, structures, and/or rules just beyond their current interlanguage system. According to Krashen (1983), when learners understand input of this kind, they also connect subconsciously the meaning of the input and a form in the input that they have not yet acquired. In order for learners to internalize this new form, either adding it to their interlanguage or using it to restructure their current system, two additional conditions must be met. First learners must notice a difference between the new form and whatever forms are in their current level of competence. Then they must have an opportunity or perhaps a number of opportunities to recognize and confirm the form. Thus, a new form must become available and noticed again -- and possibly again and again -- in comprehensible input in order for its acquisition to occur.

Krashen (1983, 1985) displays a broad perspective on what meaning and form represent in this view of input. As such, when learners make connections between input meaning and form, such connections can be shown in a variety of ways. For example, learners might come to understand a new L2 lexical item. They might perceive an association of meaning between a new form and an already acquired lexical item. They might recognize that an irregular form in the L2 has the same meaning as, and therefore can replace a previously regularized, but non-target-like version in their interlanguage. Thus, comprehensible input can offer learners data on new L2 forms as well as on relationships among forms and their meaning.

Although repeated exposure and comprehensible input appear to be closely linked in terms of assisting learners' needs for L2 data, research has yet to uncover, and indeed has barely explored, the extent and intensity of each exposure and the amount of distance between exposures that are necessary for the learner to convert L2 exposure into useful L2 data. It is possible that the repeated exposure to a new form that can occur in a single negotiation may be sufficient. Such repeated exposure may be seen in the repetition of *neat* in Excerpt (1) above, and in the many times in which *underneath* was repeated along with its meaning in Excerpt (3). In addition to the repeated exposure to the word *underneath*, the learner was told that it meant the same thing as *under*, thus possibly confirming his own views on its meaning, and

thereby enabling him to recognize the relationship between the meanings of *under* and *underneath*.

Swain (1985), citing work from child language development, posits another way in which comprehensible input may provide learners with L2 data, particularly with respect to form - meaning and form -structure relationships. She argues that learners' understanding of meaning frees up their attention so that they can induce L2 forms, structures, and rules just beyond their current interlanguage system.

The strength of Swain's argument has been reduced somewhat by recent work of Van Patten (1990). His research on adult learners of Spanish revealed that their understanding of input meaning was not accompanied by their successful focus on form. Since his subjects were given L2 input by listening to a passage four times in succession as they performed specific tasks, his findings do not speak well for the possibility that acquisition is aided through repeated exposure to a new form when it is encoded in comprehensible input.

Despite the findings of Van Patten, however, it is still possible that repeated exposure to comprehensible input over a longer period of time, and within a more interactive context than a listening task, might allow for the process of L2 data induction to which Swain refers. Thus it is possible, with reference to Excerpt (2) above, that the opportunity to confirm the NS interpretation of *tree with stick* as the *trees have branches* freed the learner to notice that article *the* and plural -s had been added to the NS production of *the trees*.

The possibility that recognition of L2 form from comprehensible input depends on the length and conditions of exposure to the input is certainly suggested by Doughty's research on relative clause acquisition in English L2 (Doughty, 1988, In press). Two experimental groups of subjects were exposed to ten lessons, given over the course of ten days. They were first presented with a text in which relative clauses were abundant in the text sentences. Then they were asked comprehension questions about the text. The texts were presented sentence by sentence on a computer screen. The two experimental groups could request help for their understanding individual sentences; this would appear on the computer screen at their request.

For one experimental group of Doughty's subjects, labelled the "meaning oriented group," help was provided in the form of word definitions and repetitions as well as through the separation and rephrasing of the matrix and relative clauses. This technique gave salience to the matrix and relativizer constructions of the sentences and highlighted relationships between. In this way, the relative clauses to which the

subjects were exposed were embedded in modified input and their features were made salient, although the rules themselves were not made explicit to them. The other experimental group, known as the "rule oriented group," was presented with prescriptive and descriptive rules for relative clause formation when they asked for assistance with the text.

What Doughty found was that after the ten days of this treatment, comprehension of the text was significantly better for the meaning oriented than rule oriented subjects. Further, and more relevant to the present discussion, was that progress in the acquisition of relativization rules was equally good for subjects in both groups. Such results suggested that the repetitions and rephrasings of relative clauses and their individual features which were performed to make the text comprehensible to the subjects also played a role in subjects' acquisition of form. These results also suggested that learners can obtain data on L2 forms and structures not only through exposure to L2 input they already understand, i.e., "comprehensible input," in Krashen's sense of the term, but also when engaged in the activity of attempting to understand input that is still incomprehensible to them. How this may come about is suggested by the findings of research on what happens to input as learners come to understand it better.

Thus research by Chaudron (1983), Long (1985), and Pica, Young, and Doughty (1987) has shown that comprehension of initially unclear input is aided when topic relevant content words in the input are adjusted linguistically through repetition, rephrasing, addition of pre or post descriptors, use of examples, etc. in response to actual or anticipated requests for clarification. It could be argued that these various modifications by the NS not only provide clues to the meanings of the individual words and utterances about which the NNS has inquired, but also contain data on L2 forms and form - meaning relationships about which no requests have been made.

This might happen in the following way: The repetition or rephrasing of content words to make them more comprehensible might require that the words be extracted or segmented from the utterance in which they had initially appeared. The segmented words can then be uttered in isolation, embedded in a new phrase or even longer utterance, or re-positioned, for example, from verb object position in the initial utterance to subject position in the repeated utterance. In this way, the repetition and modification of L2 input which make it comprehensible might also help to make several of its features salient -- individual words and forms, relationships between the meaning of the input and the L2 form or forms which encode the meaning, and the structural relationships into which the L2 forms can enter.

This can be seen in Excerpt (5), from Pica (in press). Here, the NS response to the NNS question contained a repetition and elaboration of *inside*, the word about which the NNS has asked. However, the NS response also included other linguistic adjustments. The NS used *garage* in the position of subject, having extracted it from its position as object of the verb *got* in the initial utterance.

(5)	**NNS**	**NS**
		it's got a garage on it, on the side of it where you park the car inside
	inside?	
		you know where _ _ a garage is here you park a car inside
	oh yeah	

If input modifications such as those in (5) are abundant in NS-NNS negotiation, these modifications suggest that negotiation is a good source of positive data on L2 forms, the meanings they encode and the structural relationships into which they enter.

L2 Input as a Source of Data on What is *not* in the L2

The most direct way that learners can be given data on what is not in the L2 is to be told what should not or cannot be used in therein. However, aside from warnings about taboo L2 expressions or exposure to materials which identify learner errors in compositions and conversations, it is unlikely that learners will be told that specific forms, constructions, or expressions are not in the L2 unless they themselves have used these erroneous features in their interlanguage. Thus, an alternative and more practical way for learners to obtain data on what is not in the L2 is for them to be given correction of errors in their own interlanguage production. Using as a basis, reports of others' research, particularly that of Schmidt regarding his own L2 learning experience, Long (1990), Schmidt and Frota (1986), and Schmidt (1990) have indicated, however, learners need to be aware that a response to what they have expressed is indeed a corrected version and not just another way to encode the same meaning. Thus, learners must come to recognize not only that there is a difference between their interlanguage production of message meaning and the way that this same meaning would be encoded in the target, but also that the difference is one based on error. (See Chaudron, 1983 for a related discussion on input adjustment ambiguity in teacher speech to L2 learners.)

Further, Long (1990) and Schmidt (1990) argue that conscious attention is critical to many aspects of the learning process. Within this perspective, it is possible that not only correction, but any experience which draws learners' attention to differences between their interlanguage forms and those in their interlocutor's L2 input might be helpful in bringing salience to what is not in the L2. Often, learners' participation in negotiation appears to touch on this experience. Such a possible outcome is suggested in Excerpt (6), from Pica (1987), in which the NS interlocutor negotiated briefly with the NNS as he struggled to convey the meaning of *child psychology*.

(6)	**NNS**	**NS**
	I read psych-psychology infant infantile	
	very children	child psychology? you studied child psychology?
	yes	

Theoretical discussion of additional relevance to the question of how learners obtain data on what is not in the L2 surrounds the construct of "comprehensible" or "modified" output (Swain, 1985). Swain has suggested that learners' production of comprehensible output through their own linguistic modifications might push them to manipulate L2 forms and structures in ways that move them beyond the current level of their interlanguage. As shown Excerpt (7), also from Pica (1987), this is what learners have been observed to do when, during negotiation, they respond to NS open-ended clarification requests such as *what?* , *please repeat*, etc. Here the learner modified the non-target-like version of *month* from his original utterance to the more target-like *months* in follow up to the NS request for clarification.

(7)	**NNS**	**NS**
	I gotta go then month	huh?
	ten months	

In sum, these seven excerpts from NS-NNS negotiation have suggested that participation in negotiation offers learners access to L2 input that might serve as data

for their L2 learning. During negotiation, as interlocutors respond to learner difficulty by repeating L2 input and/or adjusting it linguistically, they highlight L2 forms and relationships of form and meaning. When NS interlocutors signal to learners, they often do so by providing a more target-like version of the learner's interlanguage. These NS signals can provide learners with a basis for comparing their interlanguage with a target-like model and can draw learners' attention to what it was they were doing with interlanguage form and structure that differed from that which other L2 users are expected to do. How representative are these seven examples of negotiation as a source of L2 data? To move beyond this small inventory of examples and to explore the possibility that negotiation can provide learners with data for L2 learning, a larger corpus of NS-NNS negotiation data was examined. The data were collected from NS-NNS dyads as they interacted on four different communication tasks. Analysis of the data was carried out within a framework which attempted to identify and describe negotiation and to illuminate and distinguish its contributions to learners' needs for L2 data.

A Study of Negotiation as a Source of L2 Data

Approach to Data Collection

The analysis of negotiation to be presented is based on NS-NNS interactional data, collected over the course of several studies, all of which have been reported in previous papers (See, for example, Pica, in press b; Pica et al,1989; Pica et al, 1990; and Pica et al, in press). These studies have focused on the effects on negotiation of the social and cognitive variables of gender - pairing and information distribution and control. Therefore, priority in targeting subjects for this research was given to controlling for as many confounding factors as possible. This was done with full awareness that the process of controlling for some social and cognitive variables in order to study others would in turn limit the generalizability of the research findings. Discussion of these and other issues surrounding this approach to the research has appeared elsewhere (See Pica et al, 1989 and Pica et al, in press) and will be further addressed below.

Thus, in order to control for NNSs' linguistic and sociocultural backgrounds, subject selection was limited to Japanese L1 speakers born and raised in Japan. The NNSs ranged in age from 18 - 47, with the median age of approximately 23. All students were enrolled in low- intermediate level classes at the pre-academic English language institute of a large, private, urban university. They presented mean TOEFL scores of 455.4 for the Females and 455.1 for the Males.

The age of the NSs who participated in the research ranged between twenty and thirty-five, with the median age of approximately twenty-five years. They came from a variety of academic and employment contexts, but were predominantly graduate and undergraduate students, skilled workers and professionals, from middle and upper-middle class backgrounds. To add to the uniformity among the NSs, both mothers and persons experienced in dealing with NNSs were excluded from data collection.

Among the subjects were 17 male and 15 female Japanese LI speakers learning English L2 and 12 male and 20 female native speakers of American English. Their highly individual and exceedingly complicated schedules for work and study prevented their random assignment to experimental groups. Therefore, based on their availability for tape recording, they were arranged by the researchers into the following dyads: Ten same gender dyads, consisting of 5 Female NSs-5 Female NNSs, 5 Male NSs-5 Male NNSs and 10 cross-gender dyads, consisting of 5 Female NSs - 5 Male NNSs and 5 Male NSs-5 Female NNSs.

The larger number of total subjects (52) than members of dyads (40) reflects the task-oriented approach to data collection that has been used throughout the research. Four different communication tasks have been used in order to provide a sample of subjects' speech and patterns of interaction when given different degrees of control over the information needed to carry out each task. The tasks, which have been described in previously published research (See, e.g., Pica et al , 1989, in press) and are summarized below, were two picture-drawing tasks referred to as Information Gap 1 and Information Gap 2, a collaborative task, known as the Jig-Saw task, and an Opinion Exchange task.

Three of the communication tasks (Information Gap 1, Jig-Saw, and Opinion Exchange) had been used to collect data on ten female NSs and 5 male and 5 female NNSs in an earlier study (Pica et al , 1989) Data on one more task (the Information Gap 2 task) was required in order extend the research and address further questions on negotiation. It was therefore necessary to include additional NS and NNSs on this task. In combining the earlier and additional subjects into the ten same and ten cross gender dyads under study, the NNSs subjects were matched according to their TOEFL scores. Data for these matched subjects were combined into composite dyads, and their TOEFL scores were averaged together.

Although there were differences between the groups of subjects who participated in the earlier and additional collections of data, similarities between these groups so greatly outnumbered their differences that combining their data for research

purposes seemed justified. These differences and similarities have been described in detail in Pica et al (in press). Among the various reasons for combining the data, perhaps the most crucial was that when the NNSs' TOEFL scores were weighted according to the distribution and number of tasks in which they engaged within a composite dyad, the TOEFL means of 452.3 for the Female NNSs and 450.7 for the Male NNSs which were not much different from the respective unweighted means of 455.4 and 455.1. This finding, along with the many additional similarities across the dyads, suggested that the groups from both the earlier and additional data collections could be combined for purposes of the present study.

Each subject dyad, whether participating in all four communication tasks or a portion of the tasks, engaged in two rounds of each task, distributed randomly to control for the possible influence on results of task ordering or practice effects. The researchers introduced the subject dyads to each other and reviewed instructions for taping. The dyads then worked independently of the researchers during the tasks. These dyadic interactions were audiotaped. Only data from the second round of tasks were transcribed, coded, and analyzed.

Three communication task types and four tasks altogether were used in data collection. As noted above, the tasks were designed to provide subjects with different degrees of control over the information that was necessary to reach the goal of the task. It was believed that as they needed to request or supply information, the subjects would adjust their speech to reach mutual understanding and that therefore these tasks would provide a suitable context for the study of negotiation and variation therein.

Task materials and procedures included:

(1) Two Information Gap tasks in which the NNS and NS interlocutors were asked to take turns, one drawing and then describing an original picture, the other replicating the picture, based solely on the drawer's descriptions and comments and follow-up responses to the replicator's questions. Neither was allowed to look at the other's picture as it was being described. In the Information Gap 1 task, the NNSs were asked to draw their picture and then describe it to the NSs. In the Information Gap 2 task, the NSs were asked to draw and describe for the NNS.

(2) A Jig-Saw task, which required the NNS and NS interlocutors to reproduce an unseen sequence of pictures by working collaboratively and exchanging their own uniquely held portions of the sequence.

(3) An Opinion Exchange task, in which the NNSs and NSs were asked to share their opinions on the ways in which the preceding tasks may have contributed to language learning. This task, with its more open-ended, divergent goals, was designed to give both interlocutors potentially equal control over information.

Approach to Data Analysis

The following framework (found in complete form in Pica et al, in press) was developed to identify and distinguish instances of learner - interlocutor negotiation, provide a basis for the analysis of negotiation features, and determine their usefulness as data for L2 learning. It was based on earlier frameworks by Varonis and Gass (1985), Long (1980, 1983, 1985), and others. Earlier versions of this framework were used in a series of studies (including Pica, 1987; Pica et al , 1989), with inter-coder agreement ranging from .92 to .97. In the current version of the framework, used in Pica (in press b), Pica et al (in press), and Pica, Lewis, and Holliday (1990), inter-coder agreements ranged from .88 to 1.00.

As will be shown in the following discussion, the current version of the framework differs from those which preceded it in its effort to move beyond looking at negotiated interaction with respect to the opportunities it provides learners for comprehension of L2 input and production of modified output. Instead, the framework focuses on negotiation as a source of L2 data -- data on L2 forms and on relationships between L2 forms and meanings and L2 forms and structures. The three main categories of utterances which constitute negotiation are listed at the top of the framework and are as follows: a signal utterance which indicates a lack of understanding of a preceding utterance, which latter then becomes labelled the trigger, and an utterance of response to the signal made by the producer of the trigger. To close off the negotiation, there is an utterance or utterances which indicate that mutual comprehension has occurred or is not possible to achieve, or that the negotiation has ended and the interaction is moving forward to a new or related topic or back to a previous one. Throughout the negotiation, either the NS or NNS interlocutor can signal that the other's message is not clear or is not understood, and each interlocutor therefore can produce a trigger, respond to a signal, and close off the negotiation with utterances of comprehension, non-comprehension, or follow up.

Negotiation Signals:

Signals and responses have a wide range of linguistic features which can serve as a source of L2 data. The signalling utterances of negotiation can be open - ended

questions, statements, phrases, or words which do not in themselves incorporate the trigger (as in 2a), but often indicate that clarification of the trigger is needed. Signals can also be exact repetitions of the trigger (as in 2b). The signals shown in (2c) modify the trigger in a variety of ways: Modification can be lexical, e.g., through synonym substitution or paraphrase as in signal (2c1); inflectional, through addition, deletion or substitution of grammatical morphology (2c2); and/or structural, as in (2c3) and (2c4). These latter two types of modified signals are made by first segmenting one or more elements of the trigger, then either relocating them (e.g., moving a noun object of the trigger to a noun subject in the signal) as in (2c3), producing them in isolation as in (2c4), or incorporating them into a longer utterance, again as in (2c4). From the viewpoint of the signal producer, a (2c4) signal can be considered a partial repetition and therefore a sub-category of (2c2); however, it has been put into its own category in light of its potential role in providing structural data to the signal receiver.

The modifications in each signal utterance can occur individually or in combination. Thus it is possible to find a signal utterance in which one part of the trigger is segmented while another part is segmented, then moved. This would be considered a combination of (2c3) and (2c4). Or a signal utterance might segment part of the trigger and paraphrase another part, producing a combination of (2c3) and (2c1). Note, for example, the NS Signal in (2c1) on the Framework, reproduced in (8) below:

(8)	**NNS**	**NS**
	children they visit uncle few day (trigger)	they will stay with their uncle a week? (2c1 + 2c3 signal)

Here the NS (2c1) signal substitutes *stay* for the NNS *visit*_ and *a week* for the NNS *few day*. Within the same signal, the NS also moves *uncle* from its NNS use as object of the verb *visit* to object of the preposition *with*, Thus the signal also functions as a (2c3) type.

When produced by the NS, the signalling utterances of displayed in the Framework might serve a variety of purposes. The open-ended signals of (2a) alert the NNS to the possibility that something in the interlanguage needs to be clarified. They provide an opportunity for NNSs to turn to their own interlanguage resources and modify their output (a pattern also shown in research of Pica et al , 1989). However,

(2a) signals offer little explicit data about the L2 and do not in themselves supply the data through which this can be done.

The signals of (2b) provide NNSs with opportunities to hear their own interlanguage production and, as such, might provide a basis on which they can compare the interlanguage as produced in relatively spontaneous or unplanned communication and the interlanguage which they now have time to monitor more carefully in responding to the NS signal. The signals of (2c1) - (2c4) offer learners a modified, L2 version of their interlanguage trigger which might provide opportunities for them to compare all or part of what they have just expressed in their interlanguage and to notice how their intended meaning might be expressed in the L2.

On the other hand, as noted above, even if differences are noticed, it may be difficult for learners to tell whether the L2 encoding the signal is providing a corrected or more target-like version of the interlanguage trigger or merely an alternative one. Since negotiation is by definition, oriented toward mutual comprehension of message meaning, NS signals do not guarantee a direct way for learners to recognize whether the various signal modifications are alternative ways of saying what they have just tried to say in their trigger or whether these modifications are corrections or more target-like versions of same. To do this, the signals would need to contain explicit cues to that effect, i.e., that the NNS has expressed meaning in a non-target-like manner.

Negotiation Responses:

NNSs and NSs can respond to each others' signals in ways such as those shown in Responses (3a) - (3g). For example, they can respond with (3a), a switch to a new or related topic, with (3b), a repetition of their initial trigger or with (3c), a repetition of their interlocutor's signal. They can also respond with (3d), a modification of the trigger or (3e), a modification of their interlocutor's signal.[2] These modifications can be made in the same ways that were shown for signal modification, i.e., modification can be lexical (3d1) or (3e1), morphological (3d2) or (3e2), or structural, as in (3d3), (3d4), (3e3), and (3e4). Again, from the viewpoint of the response producer, (3d4) and (3e4) could have been considered partial repetitions and therefore sub-categories of (3b) or (3c); however, they have been categorized separately in light of the structural modification such response types bring out.

As was the case for signals, the modifications in (3d1) - (3d4) and (3e1) - (3e4) can occur by themselves or in combination. This is shown, for example, in the

morphological and lexical changes made between the NS Trigger and NS Response in (3d2), reproduced from the Framework in (9) below:

(9)	NNS	NS
		the children are visiting their uncle for a few days (trigger)
	what? (2a signal)	the children have gone to visit their uncle's home for a day or two (3d1 + 3d2 response)

Here the NS deleted the morphological endings on *visit* and *day*, and adds the possessive morpheme -s to *uncle*. The NS also paraphrased *a few days* with *a day or two*. Thus the single utterance of response contained two modifications, a morphological modification of (3d2) as well as a lexical modification of (3d1).

When NSs respond to NNS signals, through repetition and modifications of their L2 trigger utterances, with (3d1) - (3d4) and (3e1) - (3e4) responses, they reveal to NNSs data on L2 forms, relationships of form and meaning, and structural patterns of morpheme affixation and segmentation and movement of L2 elements. NS exact repetitions of their trigger (3b) make L2 input salient and provide another "shot at L2 input" for the learner (See Chaudron 1985 for discussion of this concept). Or such NS responses of repetition -- and indeed any NS responses with linguistic adjustment to the same propositional content of the initial NS trigger -- may simply give learners a "time out" or break as they keep their attention fixed on the trigger. Further, such lexically or structurally modified responses which retain the NS underlying meaning of the trigger in the re-encoding of the response, might draw learners' attention to relationships of L2 form and meaning considered so crucial for L2 internalization.

Responses of (3f) and (3g), which simply confirm the signal or indicate an inability to respond to it, are believed to sustain or alter the flow of interaction. However, they do not, in themselves, modify the L2 input. Finally, to close the negotiation, the NS or NNS can either (4a) indicate comprehension or non-comprehension or (4b) move on to a new, related, or recycled topic.

Analysis of NS-NNS Negotiation Data

Thus far, two levels of analysis have been used on the negotiation data collected from the subjects. The first analysis focused on the quantity of negotiation signals and responses in relation to the gender pairing of the NSs and NNSs and the

initial distribution of and control over information among them as it varied across the tasks. Briefly, what was found was that interaction between NNSs of both genders with female NSs brought about greater amounts of negotiation, particularly on the two information-gap tasks. These findings have have been reported in Pica et al (in press).

In the second level of analysis, the NS signals and responses were examined in ways that would reveal the extent to which these utterances might supply their NNS interlocutors with data on L2 lexis and structure, and how this, too, might be affected by gender pairing and information distribution and control. Two questions were addressed: (1) whether and, if so, how signal and response utterances provided learners with L2 data for language learning, and (2) how any of the data that were identified in (1), were influenced by the gender-pairing of the NSs and NNSs and by the distribution of and control over information provided within the tasks in which they participated.

Preliminary results of data analysis for questions (1) and (2) have been reported in Pica (1991). The analysis of the negotiation data presented below will be focused on question (1); more detailed analysis of the data for question (2) are underway. So far, however, the analysis of data for question (2) has revealed that on all four tasks and within both same and cross gender dyads, both L2 lexical and structural data were made available to the NNSs through the NS signals and responses. Although some variation has been revealed in the quantity of signals and responses and in their lexical and structural features with respect to gender and task, the variation has seldom been significant.

In order to focus the current discussion on the analysis of question (1) with respect to whether, and if so, how, negotiation provided the NNSs with L2 data for their learning, the Negotiation Framework was applied to the NS-NNS negotiation data using the following procedures :

(1) All NS utterances of response to NNS signals were examined in terms of whether they offered L2 input which was an unmodified, repeated, or modified version of the NS trigger or NS signal, i.e., whether the NS response fit categories (3a) - (3g) in the Negotiation Framework.

(2) All NS modified utterances of response to NNS signals were examined in terms of whether the modification was lexical, morphological, or structural, or a combination of these. To do this, response utterances which had been categorized as (3d) were further differentiated in terms of subcategories (3d1) - (3d4)

(3) All NS signal utterances to NNSs were examined in terms of whether they offered a version of the NNS trigger which was unmodified, repeated, or modified, i.e., whether they fit categories (2a)- (2c).

(4) All NS modified signal utterances were examined in terms of whether their modification was lexical, morphological, or structural, or a combination of these. To do this, signal utterances categorized as (2c) were differentiated into subcategories (2c1) - (2c4).

Findings

Overview

As displayed in Tables 1-2 below, NS-NNS negotiation generated a predominance of NS utterances of response in which L2 input was repeated and modified. Negotiation also resulted in NS signal utterances in which a version of the NNS trigger was repeated and modified. Also offered were brief, open questions which provided no explicit L2 data, but invited the NNSs to encode responses from their own interlanguage resources.

Further, NS modified signal and response utterances contained both lexical and structural data. However, they contained extremely few morphological modifications. Thus, the NS input generated during their negotiation with the NNSs offered data focused on L2 structural modifications, lexis and lexical relationships, but not morpheme affixation. A more detailed analysis is provided below.

TABLE 1a*
NS Utterances of Response to NNS Signals

NS utterances of response to NNS signals	n utterances	% NS utterances of Response
Without repetition or modification of NS trigger (3a), (3f), (3g)	169	24
With repetition of		
NS trigger (3b)	12	2
or NNS signal (3e)	12	2
With linguistic modification of		
NS trigger (3d)	467	67
or NNS signal (3e)	39	6
Total	**699**	**101****

*For NS - NNS dyads on four information-exchange tasks.
**Due to rounding, the total percentage adds up to more than 100.

TABLE 1b
Modifcation in NS Utterances of Response to NNS Signals

Modification of NS trigger in NS utterances of response	n utterances	% NS (3d) utterances
Lexical (3d1)	226	48
Morphological (3d2)	0	0
Lexical + morphological (3d1 + 3d2)	1	0
Structural:	129	28
segmentation with movement (3d3)	37	
segmentation w/o movement (3d4)	88	
segmentation with movement of some parts of NS trigger + segmentation w/o movement of other parts ((3d3 + 3d4)	4	
Lexical + morphological + structural (3d1 &/or 3d2) + (3d3 &/or 3d4)	111	4
Total NS (3d) utterances	**467**	**100**

NS Response Types

As shown in Tables 1a and 1b, all seven types of response were represented in the 699 NS utterances of response that the NNSs were given in response to their signals. Four hundred sixty-seven or 67 percent of these utterances were found in the four sub-categories of (3d1-3d4) as modified versions of the NS trigger. Thus the majority of NS responses to signals of the NNSs offered them modified L2 input. Six percent of the NS response utterances were of the (3e) type. As modifications of the NNS signal, these utterances offered NNSs an opportunity to hear a native, often more target-like, version of their interlanguage input. There was also a very small percentage of repetition of NS trigger (3b) and NNS signal (3c) in the NS response utterances.

Twenty-four percent of the NS utterances of response were of the (3a, 3f, or 3g) type, and thus were not modified versions of the NS own original trigger. Often they were (3a) signals and, as such, were short, affirmative confirmations or acknowledgements of yes, yeah, right, etc. of what the NNSs had uttered in their signals. Since, as shown in Pica 1991, 74 percent of the *NNS* signals were of type (2c3), and thus were short segments of the NS trigger, NS (3f) responses to such signals may have served a number of important purposes. They may have provided NNSs with confirmation, clarification, or correction with respect to their own

segmentation of L2 structures and forms. Further, they may have offered NNSs information on how the L2 could be analyzed into meaningful constituents.

These various potential contributions of the different NS response types can be seen in (10) below, an excerpt of negotiation taken from a picture-drawing information gap task. In (10), the first NNS signal, a (2c4) type, segmented *buvdaplate* from the NS trigger utterance, *and above the plate*, then embedded the segmented item into a wh-question, *what is buvdaplate ?* The NS responded with a (3d3) type of response, which thereby segmented *above* from the trigger utterance and uttered it in isolation. This NS response appeared to help the NNS with the additional segmentation of *buvdaplate* into *above the plate ?*. The NNS then sought confirmation through a second signal, also a (2c4) type, which the NS then confirmed with a (3f) type response of *yeah*.

(10)	**NNS**	**NS**
		with a small pat of butter on it
	hm hmm	and above the plate
	what is buvdaplate?	above
	above the plate?	yeah

The (3f) type response of *yeah* in (10) serves to highlight several possible contributions made by NS (3f) type responses. When NSs respond to NNS signals through acknowledgements and confirmations of yeah and with other linguistic realizations of the (3f) category, such as yes and uh huh, these responses confirm for NNSs that they have correctly understood the NS trigger utterance. NS (3f) type responses also indicate to NNSs that their signals are comprehensible.

Unfortunately, in their emphasis on confirming NNS comprehension and comprehensibility, NS (3f) type responses run the risk of providing NNSs with inaccurate or incomplete L2 data. The NNSs may be misled into concluding that their encoding of the signal was more than simply comprehensible to the NS, but was target-like as well. Fortunately, however, as noted in Pica et al (1990), and as revealed throughout the data of the present study, NS (3f) type responses tend to be produced subsequent to the initial NNS signal - NS response exchange, i.e., after the NNS has provided a second or third signal, closer to the meaning the NS has been trying to convey. This exactly what has happened in (10). The NS responded to

buvdaplate ? with modified L2 input, but offered the response of *yeah* after the NNS had signalled with the more target-like *above the plate?*.

Modifications in NS Utterances of Response

The frequency and proportion of modifications in the NS utterances of response to NNS signals are also displayed in Tables 1a and 1b. NS modifications were focused on L2 lexis and structure, both separately and in combination within the same utterance. The majority of the modifications, or 48 percent, were of L2 lexis exclusively, and thus were characterized by synonym substitution and use of paraphrase and example.

Structural modifications of L2 input were given to NNSs in 129 or 28 percent of the NS utterances of response. More than half of these modifications involved segmentation of a word or phrase from the trigger utterance without movement into a different location in the response utterance. Thus, in response to their signals, the NNS would be given a word or phrase that the NS extracted from the NS trigger and either repeated in isolation or embedded in an expression such as I mean ... or So it's supposed to be ...

As noted above, these and other utterances of response in the data which involved segmentation alone were very much like partial repetitions of the trigger. What this suggested was that despite the tiny amount (two percent) of verbatim repetition of entire L2 trigger utterances given to the NNSs in response to their signals, a great deal of L2 repetition through structural segmentation was nonetheless available to them. Both the exact repetitions and the repeated segments offered the NNSs an opportunity to listen to the L2 input they may have missed the first time around in the NS utterance that had triggered their signal. In addition, the segmentation of L2 forms and constituents from larger units in these partial repetitions gave NNSs opportunities to obtain data on L2 structural units.

Finally, 24 percent of the modified NS utterances of response given to the NNSs were modified in terms of both lexis and structure. Typically, as shown in (11), below, NNSs would be given a segmented part of the NS trigger utterance to which the NNS had signaled, in this case *straight out* . What was segmented would then be embellished by the NS with a premodifier or postmodifying phrase or would be preceded or followed by a paraphrase or description. Such responses thereby offered NNSs data on both L2 structural segmentation and ways in which the meanings of the resulting segments could modified.

(11)	NNS	NS
		they're just straight out
	straight out?	towards her back her left arm towards her back... straight out

Further examples of negotiation in which the NS response might bring salience to relationships between form and meaning was seen in (10), above, during which the NS segmented one constituent out of what the NNS had initially heard as the single unit *buvdaplate*. A similar form-meaning relationship was revealed in (12), below. Here, the NNS used (2c3) segmentation-type signals, asking the NS, first about *rectangular*, then about *rectangle*. The NNS third signal also used segmentation, but in so doing extracted *square* from the prepositional phrase *like a square* and juxtaposed it to *except*. The NS response provided further information on the meaning of *square* as well as showed the NNS that *except* can join the two utterances, *a rectangle is a square except a square has four equal sides* .

(12)	NNS	NS
		...it's a rectangular bench
	rectangular?	yeah it's in the shape of a rectangle with um you know a rectangle has two long sides and two short sides
	rectangle	re-rectangle it it's like a square except you flatten it out
	square except?	um a rectangle is a square
	uh huh	except a square has four equal sides
	yes	a rectangle has two sides that are much longer and two sides that are much shorter

NS Signal Types

As shown in Tables 2a and b, of the 558 signal utterances that NNSs were given by NSs, 442 or 79 percent of these utterances were of the (2c1) - (2c3) type and therefore contained modification of all or some of the features of the NNS trigger.

Repetition of NNS triggers characterized nine percent each of the NS signals. Twelve percent were not modified or repeated; the majority of these were short, open questions or remarks such as "What was that?" "Huh?" or "Sorry, I don't understand," which sought clarification of the NNS trigger.

TABLE 2a
NS Signal Utterances to NNSs*

NS signal utterances to NNS trigger	n utterances	% NS signal utterances
Without repetition or modifications (2a)	67	12
With repetition (2b)	49	9
With linguistic modification (2c)	442	79
Total NS signal utterances to NNSs	**558**	**100**

*For NS - NNS dyads on four information-exchange tasks.

TABLE 2b
Modification in NS Signal Utterances to NNS Trigger

Modification of NNS trigger in NS signal utterances	n utterances	% NS (2c) utterances
Lexical (2c1)	178	40
Morphological (2c2)	0	0
Lexical + morphological (2c1 + 2c2)	1	0
Structural:	184	42
segmentation with movement (2c3)	52	
segmentation w/o movement (2c4)	131	
segmentation with movement of some parts of NNS trigger + segmentation w/o movement of other pats (2c3 + 2c4)	1	
Lexical + morphological + structural (2c1 &/or 2c2) + (2c3 &/or 2c4)	79	18
Total NS (2c) signal utterances	**442**	**100**

The predominance of NS modified signals suggested that the NNSs might have been provided with opportunities to hear their own interlanguage given back to them and to notice differences between forms and features of their interlanguage trigger and how they might be expressed in the L2. Even if such differences could be noticed,

however, there was seldom anything explicit in the modified NS signals as to whether they might serve the NNSs as cues for self-correction. Since the context for the negotiation consisted of communication tasks and the majority of the NS signals sought clarification or confirmation of NNS message meaning rather than message form, the NNSs could easily have perceived the modified signals as simply the way the NS had chosen to encode requests to confirm the content of the NNS message. Thus, with rare exception, the NS modified signals offered the NNS few explicit clues as to whether the modifications therein represented a corrected or more target-like version of the interlanguage trigger or merely an alternative one. This was also the case for the handful of NS signals in the data that were exact repetitions of NNS production. A typical signal-response exchange, focused on message meaning, is displayed in (13). The NS signal offered a lexical modification to the NNS by supplying the word *rectangle*, which was apparently the word that the NNS himself was trying to convey to the NS, but there was no explicit comparison drawn with the NNS version. The NS signal in (14) represents a somewhat greater amount of explicitness regarding an NNS vs. target-like version of the word *crossed*, although the NS did not tell the NNS exactly what was different about the two productions. In (15), which was the only sequence of its kind in the negotiation data, the NS provided an open-ended signal which questioned the NNS production of *flower*, and then proceeded to teach the target-like pronunciation.

	NNS	NS
(13)	...not real square...um hard to tell	
	you yeah ok square but long square	a rectangle?
	yeah	
(14)	the windows are [krozd]	the windows have what?
	[krozd]	[krawst]? I'm not sure what you're saying there
	windows are [krozd]	oh the windows are [klozd] oh ok sorry
(15)	and left tree is a [flo: wer]	is what?
	[flo: wer]	a what?
	a [flo: wer] [o]	yeah get the book

flower	oh a flaUer
flower	oh a flaUer
flower oh pronunciation is very difficult _ _ flower	flaU:
eh? flower	um
what's [f]?	[f ... o...]
ow	you hold your tongue and go [aU]

Modifications in NS Signal Utterances

Also shown in Tables 2a and 2b, the modifications given to NNSs in NS signal utterances were lexical and structural, and in similar proportions of 40 and 42 percent respectively. More than two-thirds of the structural modifications involved segmentation. As illustrated in (16), below, these provided the NNSs with data on L2 structure as well as opportunities to hear portions of their interlanguage given back to them by the NSs.

The first NS signal segmented *on the front* from NNS *on the front is a small stone* . The second NS signal modified the NNS *on the front* to *in front* and segmented the NNS *doors* , eliminated the -s ending and moved *door* into a prepositional phrase post-postmodifier for *front*, to which the NNS was able to respond with the more target-like response, *there is a small step*.

(16)	**NNS**	**NS**
	... I think on the front is a small stone	on the front?
	yeah oh doors	in front of the door
	yeah there is a small step, yes	oh yes

The NS signals, however, provided no clues as to whether the NS *in front of the door* was the target-like way to encode the L2 form-meaning relationship of what the NNS had intended or was simply a different way to encode this (Again see Chaudron, 1983 for related views on input adjustment ambiguity in teacher speech to L2 learners). The NS negotiation signal was effective in clearing up the immediate impasse, but what was not so obvious was its long term potential for helping the NNS to distinguish between the meanings of in and on in themselves and in the various

contexts in which they can be used. Perhaps, over time, ambiguities such as these can be worked out through the NNS further participation in negotiation about in, on, and door or through other experiences in the L2. However, what this and other negotiation sequences suggested was that, if learners need to have access to both what is and what is not the L2, negotiation can be of help, but it does not fulfill all of a learner's needs in the latter area.

Eighteen percent of the NS signal utterances given to NNSs were modified both lexically and structurally. Typically, the combination of lexical and structural modification provided NNSs with a segmented part of the NS trigger utterance to which the NNS had signaled, pre- or postmodified, or followed by a paraphrase or description. Such signals thereby offered NNSs data on both how their interlanguage could be both segmented and how the resulting segments could then be modified in meaningful ways. This was illustrated in (17). Again, however, the NNS was not shown whether traffic cross was an acceptable way of expressing *where people can cross*, was a synonym for *traffic light*, or was simply a comprehensible way of expressing the meaning of what he had drawn in his picture.

(17)	**NNS**	**NS**
	so there's a cross in the center of the paper	what do you mean by cross?
	traffic cross	oh where people can cross? or traffic light?
	yes	

Conclusions

This paper has attempted to address the question of how language learners' participation in NS-NNS negotiation might meet their needs for L2 learning, especially with regard to the amount and type of data on L2 lexical and structural features that are made available. Analysis of NS-NNS negotiation revealed that NS signals and responses of negotiation provided NNSs with a great deal of L2 lexical and structural data.

By supplying L2 data, the utterances given to NNSs by NSs in negotiation served the NNSs in ways that supplemented the two most widely acknowledged contributions of negotiation -- the promotion of NNS comprehension of L2 meaning and their modification of interlanguage output. In particular, NS utterances of

response to NNS signals offered the NNSs data on L2 lexis and structures that could possibly be used to guide them in their internalization of interlanguage grammar. Many of the NS signals also offered learners modified versions of their interlanguage. At best, these signals offered NNSs forms for their meanings and meanings for their forms. Unfortunately, there was nothing transparent in modifications as to whether they represented more accurate versions of the NNS interlanguage or simply alternative ways to encode it.

Previous papers on negotiation have ended on a cautious note (See especially Aston, 1989 and Pica et al , in press). Of concern has been whether an emphasis on counting and comparing NS and NNS negotiation signals and responses has been too heavily grounded in the assumption that negotiation can make a difference in SLA. Although a cause - effect relationship remains to be shown, and indeed may be impossible to uncover as long as researchers continue to use a short-term approach to study negotiation, the present analysis of negotiation provides a reason to be a bit more definitive about its larger, more lasting contributions to learners' needs. Even if negotiation cannot meet language learners' needs completely, it appears to offer them a great deal of lexical and structural data on what is in the L2, and for this reason, warrants further study in regard to its role in language learning. Yet, if researchers are to provide further insight into the role of negotiation in meeting learners'' needs, they must respond to the following research needs:

First, the impact of negotiation on learners must be studied over time, not just within a single recording session. Meeting this research need may not necessarily require a ten-month longitudinal study; negotiation data collected over the course of several research sessions could serve as a useful first step in charting the impact on the learner's interlanguage made by the L2 lexical and structural data offered in negotiation signals and responses. The need for longitudinal has often been suggested (e.g., by Long, 1991; Brock et al , 1986; Schmidt and Frota, 1986; and others), and it remains a crucial area of SLA theory construction and research.

Second, further research is needed on whether, and if so, how the L2 data carried by negotiation signals and responses can take care of learners' needs for both positive and negative L2 evidence. To address this research objective, researchers must figure out ways in which the activity of negotiation can be "stretched" to provide learners with data on both what is in the L2 as well as what is not in the L2. To achieve this aim, a battery of other task and activity types must be added to the current repertoire of communication tasks. Since the emphasis in communication tasks is on the exchange of message meaning, and most communication tasks do not require

structural precision for their execution, such tasks seldom require interlocutors to call attention to or to correct learners' grammar inaccuracies, or to compare the L2 input with their interlanguage output. Thus, studies such as the present one, which have asked learners to participate in communication tasks, have shed light on positive L2 data supplied by negotiation, but these studies have restricted what can be uncovered about the extent to which negotiation can provide learners with negative L2 data.

Recent work by Bley-Vroman and Loschky (1990) has brought much promise to meeting this research need. Approaches to devising structure-based tasks are offered which serve as a fruitful alternative to communication tasks in assisting learners' access to L2 data. Such tasks focus learners' attention on L2 form and thus go beyond the emphasis on conveyance and mutual comprehension of message meaning so characteristic of tasks currently used in negotiation studies. It is possible that structure - based tasks can be organized to give learners access to data on L2 grammatical morphology. For example, verb tense and aspectual data might be made available as learners negotiate with interlocutors over the sequence of events, their continuation, conclusion, or future occurance. Data on noun phrase inflectors and functors, e.g., -s plurals and articles, might be revealed through tasks which focus on the specificity of objects. Such structure-based communication tasks might yield L2 data far richer than that uncovered in research so far, as such tasks are based on both language form and content, and not only on the distribution and control of information required for task completion, which has characterized many of the communication tasks used in research on negotiation.

Third, studies must focus on whether the lexical and structural data supplied in negotiation signals and responses are quantitatively and qualitatively different from the data supplied in the course of non-negotiated interaction, i.e., as NSs simply talk with NNSs. Although research has already shown that negotiated input is more comprehensible than non-negotiated input (See Pica et al, 1987), it cannot be assumed that the the NS signals and responses of negotiation are more dense in lexical and structural data than the statements, gestures and responses in the surrounding discourse. To that end, current projects by Holliday (forthcoming) and Lewis (in preparation) are providing needed comparisons.

Finally, even if studies on negotiation indicate that interlocutors offer an important and significantly greater source of L2 data to learners as they negotiate message meaning, what must be kept in mind is that such data will not necessarily be taken in by the learner for use in language learning. The work of Pienemann (1984, 1989) serves as an important reminder that L2 learners can learn only that which they

are ready to learn. Research will be able to illuminate the extent to which learners' participation in negotiation addresses their needs for L2 learning only when researchers are sure of what it is about the L2 that learners need to learn and are ready to learn.

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[2] Although (3e) was also a modification category, there were too few (3e) utterances in the data to warrant more than occasional analysis of these features as L2 data.

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